RAPIDSOS

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VIA ECFS

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Docket No. Docket RM-11780 - ***Public Notice on Issues Related to 911 Applications for Smartphones***

RapidSOS, Inc. (RapidSOS) welcomes the opportunity to comment on the Public Notice issued in relation to the request of the National Association of State 911 Administrators (NASNA) to address important issues related to 9-1-1 applications for smartphones (9-1-1 apps).[1] We appreciate the Commission's continued leadership on 9-1-1 issues and its focus on the need to transition to Next Generation 9-1-1 (NG9-1-1) as soon as possible to address the changing nature of consumer communications services and applications, and the underlying networks they ride on.

RapidSOS is an emergency communications technology company founded with the mission of creating transformative technology to improve emergency communications. As part of RapidSOS' portfolio of products and services, we offer a smart phone application called Haven that connects users to the appropriate 9-1-1 Public Safety Answering Point (PSAP) during an emergency.[2]

Developed over four years in close consultation with the public safety community, Haven was designed to showcase how the capabilities of modern smart phones can be integrated into the existing 9-1-1 system. While the technology developed by RapidSOS is capable of integrating with fully IP-based NG9-

[1] https://apps.fcc.gov/edocs_public/attachmatch/DA-16-1405A1.pdf.
[2] https://rapidsos.com.

1-1 systems, the reality is that the nation is still in the early stages of NG9-1-1 deployment. Thus, while it would be our preference to focus our efforts on interfacing with NG9-1-1 systems, in the interim we recognize the importance of ensuring that we, and any other 9-1-1 app, integrate with the existing 9-1-1 system. However, the limitations of the legacy system should not be a deterrent to the use of 9-1-1 apps that are properly developed and designed to interface with today's 9-1-1 system as we move towards NG9-1-1. In fact, services like Haven that can meet existing consumer expectations for 9-1-1 access and add valuable data and capabilities for emergency calls can and should be an accelerant for nationwide NG9-1-1 deployment.

Developed over several years in close consultation with the public safety community, and endorsed by over two-dozen national non-profit organizations, the Haven application assists emergency callers in several ways:

- Geospatial routing of emergency calls using device-based hybrid location
- Provisioning device-based hybrid location at call-time into the automatic location information (ALI) database
- Provisioning caller name, contact information, and type of emergency at call-time into the ALI database
- Offering an intuitive user-interface that may be preferable by portions of the population (particularly individuals with disabilities)
- Providing users with additional ways to communicate if they are unable to speak, especially in areas where text-to-911 has not yet been deployed
- Leveraging advanced features of legacy and NG9-1-1 networks where available to transmit additional data

We are grateful for the thousands of public safety officials and thought leadership of the major public safety associations and national non-profits that assisted with the development and testing of Haven. We've learned considerably through this work and believe strongly that close collaboration with the public safety community is essential for developing new technology in this sector.

RapidSOS shares many of the concerns outlined by NASNA in their letter to former Chairman Wheeler. We are deeply worried about 9-1-1 apps that promote false claims or provide functionality that is

detrimental to public safety, such as allowing spoofed locations that could be used to mislead PSAPs, or any means that would slow down the process of gaining access to the 9-1-1 system.

Throughout the development, testing and deployment of our products and services, we have continually sought guidance of the public safety community in determining how 9-1-1 apps should interface with PSAPs. We have spent considerable resources studying and developing solutions that comply with guidance provided by major public safety associations. Most notably, the National Emergency Number Association (NENA) published *Public Safety Considerations for Smartphone App Developers*[3] in 2012, which included very important guidance that has informed and influenced how we develop our products. Similarly, we followed guidance issued by the Association of Public Safety Communications Officials (APCO), including the *Key Attributes of Effective Apps for Public Safety and Emergency Response*[4] published in 2013. These guidelines served as an important baseline for our work, and we were fortunate to have the opportunity to learn from and engage with the industry in a number of additional ways. For example, RapidSOS has:

- Engaged with leadership and technical staff of the aforementioned public safety associations
- Established a 9-1-1 advisory board that includes experts hailing from many of the leading public safety organizations (former FCC staff, former APCO and NENA presidents, former NENA staff, EENA technical committees, etc.)
- Participated, exhibited and spoken at most relevant industry conferences (NENA, APCO, NASNA, iCERT, 911 Goes to Washington, NENA Developer Conference, NENA Joint Committee Meeting, NENA Standards & Best Practices Forum, APCO Emerging Technology forum, APCO Workshop on App Interoperability, various State/regional conferences and meetings)
- Participated in standards development such as multiple NENA working groups applicable to our products (e.g. contributed to the NENA Class of Service Working Group to establish a new appropriate Class of Service for 9-1-1 apps and other mobile services, participated in NENA Additional Data Working Group, participated in planning for NENA Industry Collaboration Event ICE 7)
- Conducted a rigorous year-long quality assurance and testing program (consisting of thousands

[3] http://www.nena.org/?page=SmartphoneApps
[4] http://appcomm.org/wp-content/themes/directorypress/thumbs/AppComm_Key_Attributes.pdf

of internal, external, and public safety testers working with hundreds of PSAPs across the United States), giving PSAPs, public safety personnel, and technology experts the opportunity to test and provide feedback prior to commercial launch

- Made significant adjustments to our product based on feedback from public safety professionals (including but not limited to: location spoofing prevention, adherence to E9-1-1/NG9-1-1 standards, review of marketing claims and promotional material with public safety officials, downstream dispatching considerations)
- Informed PSAPs nationwide ahead of our mobile application launch, provided multiple pathways for feedback and voluntarily provided training material through a nationwide multi-channel outreach campaign (webinars, presentations at main industry conferences, informational materials mailed to every PSAP, email newsletter campaign, etc.).

RapidSOS realizes that not every app developer who offers a 9-1-1 app has gone through such a process. Many app developers who are interested in offering a 9-1-1 app may have very good intentions and want to make a positive impact on the personal safety of their customers, but have limited public safety industry experience and have spent less time and fewer resources to acquire such expertise. Therefore, many app developers make choices that might seem reasonable to their customers, but are in conflict with the high demands of public safety. We believe that the industry and the public at large would benefit from a clearly defined set of criteria an app developer needs to meet prior to offering a 9-1-1 app to ensure that all 9-1-1 apps are developed in a manner that safeguards accurate and timely response and meets cybersecurity best practices. There are many ways that the FCC could play a role in such a process.

For example, the Commission could build on the important 911 Apps Workshop that it held on May 8, 2015, to discuss "how existing apps are assisting in the provision of 911 service, how 911 network architecture affects requirements for the app design and delivery, and future steps needed to encourage further development and integration of 911 apps into the broader 911 ecosystem."[5] Convening leaders from the 9-1-1 apps community and 9-1-1 industry leaders with public safety experts in an effort designed to produce best practices, akin to the many other successful industry collaborations convened by the FCC (e.g. the recently announced Broadband Deployment Advisory Committee (BDAC),

[5] https://www.fcc.gov/news-events/events/2015/05/911-apps-workshop.

Communications Security Reliability and Interoperability Council (CSRIC) and the Technological Advisory Committee (TAC)), would be a logical starting point towards the development of a much-needed national 9-1-1 apps certification process.

To the extent that the Commission determines it has jurisdiction to regulate 9-1-1 apps, then the Commission could consider a rule requiring all app developers that offer a "9-1-1 app" to engineer their products such that they connect callers to the appropriate 9-1-1 Public Safety Answering Point through established E9-1-1 or NG9-1-1 routing mechanisms, and the associated requirements for delivery of voice and location specified in the applicable 9-1-1 industry standards (e.g., NENA i2[6], NENA i3[7]). Whether through its convening ability or by rule, as appropriate, by facilitating the establishment of a national certification process that results in 9-1-1 app providers properly connecting callers to 9-1-1 through established E9-1-1/NG9-1-1 mechanisms, the caller could always expect to be connected with a trained telecommunicator at the correct PSAP, and the PSAP could expect that calls from 9-1-1 apps are in compliance with industry standards and voice/data delivery mechanisms, mitigating any concerns with regards to interoperability and downstream dispatch considerations. For providers of 9-1-1 apps, this would ensure that they understand the requirements as they consider the development of new services and capabilities.

Finally, as the FCC continues to look at the issue of 9-1-1 apps, we encourage the Commission to consider the issue through the lens of consumer protection and innovation. Ensuring that consumers are protected and able to get the help they need is paramount. That means ensuring that 9-1-1 apps conform to public safety expectations when delivering 9-1-1 calls. But it also means ensuring that consumers can access the benefits that come with 9-1-1 apps that responsibly offer capabilities beyond the ability of callers today to place a voice call with an address or estimated location. Thus, while ensuring consumer protection, the Commission should also simultaneously consider the important role 9-1-1 apps can play to bring new technology into the public safety industry.

Specifically, RapidSOS believes that mobile applications offer an ability to showcase cutting edge technology ahead of broader adoption by wireless carriers. For example, as the wireless industry continues to make strides towards improving indoor wireless location accuracy, mobile applications can

[6] https://www.nena.org/?page=Interim_VoIP_i2.
[7] https://www.nena.org/?page=i3_Stage3.

showcase the benefits of integrating technologies such as device-based hybrid location (leveraging multiple sensors assessing Wi-Fi access points, Bluetooth beacons, barometric pressure, and contextual location information in addition to network-based and GPS-based location technology) to enhance the location determination.

We also believe that mobile applications play an important role in fulfilling the needs of specific segments of the population where a traditional phone call may be difficult. RapidSOS has worked closely with leading advocacy organizations in the medical, disability, and domestic violence sectors in the development of the Haven application, each of whom recognizes the benefits of new technology for their communities. The ability to provide enhanced information (accurate real-time and historic location information, emergency type, and where available, additional information about the situation or the caller) was deemed important by these communities. Dozens of large non-profit organizations, including the National Coalition Against Domestic Violence[8], Rape, Abuse & Incest National Network (RAINN)[9], Break the Cycle[10], Diabetes Hands Foundation[11], Danny Did Foundation[12], National Down Syndrome Congress[13], Brain Aneurysm Foundation,[14] Center for Hearing and Communication[15], Pediatric Congenital Heart Association[16] and Hearing Health Foundation[17], have endorsed the technology and provided it to their members. We look forward to continuing our collaboration with these organizations and the public safety community to accelerate the transition to NG9-1-1 and improve access to emergency services for all Americans.

We would like to thank the Commission again for the opportunity to comment on this important issue. We also would also like to express our gratitude to NASNA, NENA, and APCO for their leadership in posting guidelines and bringing attention to these very important topics. We also appreciate all the time and effort that thousands of public safety communications officials have invested to collaborate with us

[8] www.ncadv.org/
[9] www.rainn.org/
[10] www.breakthecycle.org
[11] www.diabeteshandsfoundation.org/
[12] www.dannydid.org/
[13] www.ndsccenter.org/
[14] www.bafound.org/
[15] www.chchearing.org
[16] www.conqueringchd.org
[17] www.hearinghealthfoundation.org/

as we developed our technology. We look forward to continuing to collaborate with the industry including participating in any effort led by the Commission's Public Safety and Homeland Security Bureau alongside the public safety community to advance public safety communications and consumer safety.

Respectfully,

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